

## **SYSTEM FOR CONTROLLED RELEASE OF CEMENT MIXTURE FROM A SUSPENDED BUCKET**

### **TECHNICAL FIELD OF THE INVENTION**

The present invention relates to handling and utilization of cement buckets suspended from cranes.

### **BACKGROUND OF THE INVENTION**

Concrete buckets suspended from cranes are used to distribute flowable concrete into pre – formed forms of a building project. Several operators are needed to direct the bucket to a convenient position above the form, to release the concrete from the bucket and to distribute discharged concrete. Pouring concrete efficiently and safely from suspended concrete buckets is a crucial task in a building project.

## BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a schematic description of the bucket of the invention with the shutter partially closed;

5 Fig. 2 is a schematic description of the bucket of the invention with the shutter closed;

Fig. 3 is a schematic description of the shutter and suspending wheels;

Fig. 4 is a schematic description of the shutter and suspending wheels  
10 in an opened condition.

## DETAILED DESCRIPTION OF THE PRESENT INVENTION

In accordance with the present invention, cement is released  
15 gravitationally from a suspended cement bucket by the opening of a shutter at the bottom of the bucket. Opening of the bucket outlet aperture is performed by an operator pulling a rope, the length of which is not limited. To explain the mechanism of the release of cement, reference is made now to **Fig. 1**. To bucket **10** is appended a construction frame **12**. A hose **14** at the bottom of the  
20 bucket **10** receives the concrete when shutter **16** is opened. In the figure the aperture **18** is partially opened. Handle **20** is pulled by an operator (not shown)

through manipulation of the rope **22**. Spring **24** biases the handle **20** and the shutter **16** towards the bucket **10**. A second operator manipulates the flexible hose **14**, when the shutter is opened, for distributing the flowing concrete. This can however be done by the same operator opening the shutter. In **Fig. 2** the handle **20** has been released by the operator, by loosening the rope **22**. The spring **24** has contracted, shutting off the shutter **16**. Concrete can no longer flow out of the bucket **10**.

The main structural features of a shutter of the invention are shown in **Fig. 3**. Shutter **40** is slidable by wheels **42** attached at its both flanks (only the wheels at one flank are shown). The wheels roll on rails **44**. In **Fig. 4** the shutter is shown opened, revealing hose flange **50** of the hose described above. At this state, concrete pouring down from the concrete bucket in the direction of arrow **52** can flow downwards through the hose. The shutter **40** closes by pushing in the direction of arrow **54**.